

HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 User Guide



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Overview

About this guide

This guide is designed for system administrators who use the HP BladeSystem Management Pack for Microsoft System Center Essentials 2007 and other HP tools to manage the operations of HP BladeSystem c-Class Enclosures within a System Center Essentials environment.

You should be familiar with the configuration and operation of Microsoft® Windows®, Microsoft® System Center Essentials, and the HP BladeSystem c-Class Onboard Administrator. Because of the potential risk of data loss, only individuals who are experienced with using this software should implement the procedures described in this guide.

HP assumes that this level of expertise is available to customers using the *HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 User Guide*. HP recommends reviewing your Microsoft® product documentation for assistance in understanding this guide.

Introduction

HP delivers a new management pack that complements and extends System Center Essentials, integrates alert processing, state monitoring, and hardware resource lifecycle management for HP BladeSystem c-Class enclosures.

Designed specifically for System Center Essentials, the HP BladeSystem Management Pack provides user-initiated discovery of the c-Class enclosures, predefined views, monitors, event processing rules, and tasks. These features enable administrators to proactively streamline IT operations and ensure increased systems availability by monitoring HP BladeSystem c-Class enclosure hardware platforms through a common System Center Essentials console.

The HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 allows for user-initiated configuration, monitoring, and the automatic grouping of the HP BladeSystem c-Class enclosures into a common view. Default monitoring highlights the state of HP BladeSystem hardware subsystems and components, and presents a consolidated view of the enclosure status. Predefined event processing rules build on the functionality of events from the Onboard Administrator. The HP BladeSystem c-Class enclosure hardware events are submitted to the Windows® Event Log and are displayed as alerts in the System Center Essentials Console, including real-time and prefailure event definitions.

For advanced hardware lifecycle management and remote administration of HP BladeSystem c-Class enclosures, the HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 includes tasks that launch the HP Onboard Administrator and advanced remote server administration through the HP Integrated Lights-Out Management Processor when installed.

Features

The HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 supports the following new features:

- Integration with Microsoft® System Center Essentials 2007
- New HP BladeSystem c-Class enclosure icons for System Center Essentials Diagram View
- Improved management of events by eliminating multiple alerts in Rules
- Fully scripted installation that imports management pack data into the System Center Essentials database automatically
- New HP Enclosure Monitor Manager to allow users to enter Enclosure Onboard Administrator credentials and configuration required for monitoring of HP BladeSystem c-Class enclosures
- New HP Enclosure Monitor Service for monitoring the HP BladeSystem c-Class enclosure, its subsystems and components via the Onboard Administrator
- Predefined rules to process and display Windows® Event Log entries for HP BladeSystem c-Class enclosure hardware alerts in the System Center Essentials Console
- Policies to present consolidated views of key HP BladeSystem c-Class attributes for rapid system analysis
- HP BladeSystem c-Class Enclosures represented in the Diagram View
- Console Tasks to launch HP Onboard Administrator, HP Enclosure Monitor Manager, and HP Integrated Lights-Out Management Processors from the System Center Essentials Console
- Access to HP BladeSystem c-Class Enclosure and other HP ProLiant Essentials value-added software for hardware performance management, vulnerability assessment, and advanced lifecycle administration of blade servers and virtual systems through HP SIM

Benefits

The HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 provides the following benefits:

- Hardware resource management for HP BladeSystem c-Class enclosures with augmented System Center Essentials
- Streamlined IT administration and increased systems availability

Product architecture

The HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 integration is designed to perform the following major functions:

- Identify, group and display HP BladeSystem c-Class enclosures within the System Center Essentials Console
- Populate System Center Essentials with enclosure attributes and configuration data for HP hardware and software components
- Monitor and display the state of HP BladeSystem c-Class enclosure hardware and the associated management services
- Proactively identify, translate, and display HP hardware events written to the Windows® Event Log as System Center Essentials alerts
- Provide browser-based links to HP management tools for hardware resource management and advanced remote administration from within System Center Essentials

All elements of the HP Server Management Packs are copied to the System Center Essentials database. The following elements are included:

- Classes and Attributes
- Discoveries
- Monitors
- Rules
- Tasks
- Views

The HP BladeSystem Monitor Service uses the user defined information entered through the HP BladeSystem Enclosure Monitor Manager to connect and monitor the Enclosures. If the connection succeeds, the HP Enclosure Monitoring Service continues to monitor the enclosure for inventory, health state and events.

After the installation of the HP BladeSystem Management Pack, System Center Essentials transfers the HP BladeSystem management pack to System Center Essentials Agent managed by the System Center Essentials server. The management pack automatically discovers the HP BladeSystem Enclosure Monitor Service and its monitoring enclosure information. After the management pack discovery and monitor process, HP BladeSystem c-Class enclosure information can be seen on the System Center Essentials console. The discovered inventory data and monitored state are reflected on the state and diagram views.

Installation

Installation overview

To install the HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007:

1. Download the appropriate management pack from the HP website (<http://www.hp.com/servers/integration>), and unzip the file.
 2. Unzip the self-extractable executable kit and select the appropriate management pack to install.
- The following table shows the kits available for selection.

Kit name	File name	Description
HP BladeSystem Enclosure Management Pack 1.0 for System Center Essentials 2007 (x86)	HPBladeSystemMPforSCE1_0x86.msi	Used to install HP BladeSystem Enclosure management capability where System Center Essentials is operating in an x86 environment.
HP BladeSystem Enclosure Management Pack 1.0 for System Center Essentials 2007 (x64)	HPBladeSystemMPforSCE1_0x64.msi	Used to install HP BladeSystem Enclosure management capability where System Center Essentials is operating in an x64 environment.

3. Install the HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 into the System Center Essentials environment.
4. The installer automatically imports the management packs to the System Center Essentials 2007.
5. Register the HP BladeSystem c-Class enclosures in the HP BladeSystem Enclosure Monitor Manager tool launched during the last steps of the installation.
6. Complete the post-installation procedures to discover and display HP BladeSystem c-Class enclosures in the System Center Essentials 2007 console.

Preinstallation checklist

Before installing the HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007, the following requirements must be met:

- Microsoft® System Center Essentials 2007 is properly installed on the system. The HP BladeSystem Management Pack is not for use on systems running Microsoft® System Center Operations Manager 2007.
- The HP ProLiant Server Management Pack 1.0 for System Center Essentials 2007 is properly installed.
- The appropriate versions of firmware are installed on HP BladeSystem c-Class enclosure. The latest support information is listed in the *Microsoft® System Center Integrations Support Matrix*.
- A network connection has been established from the System Center Essentials 2007 server to the managed HP BladeSystem c-Class enclosures and the HP Onboard Administrator Web console. This

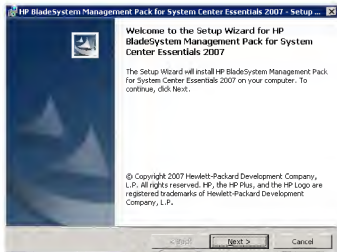
is required to monitor the state of the HP BladeSystem c-Class enclosures and to capture SNMP Trap packets generated by HP BladeSystem c-Class enclosures.

- An account is set up with the HP Onboard Administrator Web console to monitor the enclosure. During the last step of the installation, the user is asked to launch the Enclosure Monitor Manager to register HP BladeSystem c-Class enclosures with user name and password.
- An account is set up on the HP Onboard Administrator Web console to monitor the enclosure. During the last step of the installation, the user is asked to enter a user name and password in the Enclosure Monitor Manager.
- The SNMP Trap setting to the HP Onboard Administrator Web is enabled, and the community string and IP Address of the System Center Essentials 2007 server is registered.
- The Windows® SNMP service is configured and active on the System Center Essentials 2007 server.
- PowerShell 1.0 is installed on the System Center Essentials 2007 server. PowerShell 1.0 64 bit release must be installed for x64 platforms.

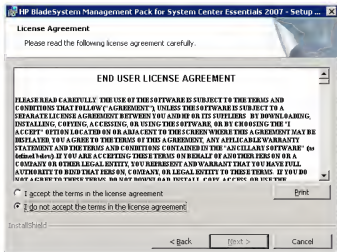
Installing the HP BladeSystem Management Pack 1.0 for System Center Essentials 2007 (x86 or x64 editions)

1. Close the **System Center Essentials** console if it is running.
2. Install either the HPBladeSystemMPforSCE1_0_x64.msi file or the HPBladeSystemMPforSCE1_0_x86.msi file on a system having the System Center Essentials Management Server.
3. Execute either the HPBladeSystemMPforSCE1_0_x64.msi file or the HPBladeSystemMPforSCE1_0_x86.msi file to begin the installation process.

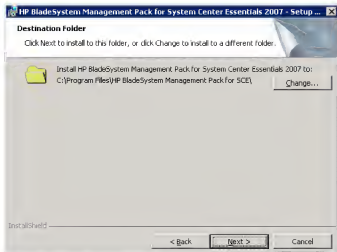
4. Click **Next**.



5. Select **I accept the terms in the license agreement**, and click **Next**.

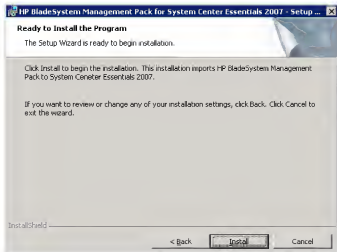


6. Click **Change...** to change the installation folder.

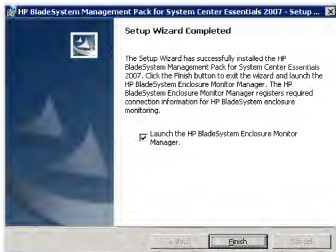


7. Click **Next**.

8. Click **Install**. The installation automatically imports the management packs. The installation progress screen appears.



9. Click **Finish**.



10. Select the **Launch HP BladeSystem Enclosure Monitor Manager** checkbox to launch HP BladeSystem Enclosure Monitor Manager. The registration of enclosures is required to start monitoring the HP BladeSystem c-Class enclosures.

After the installation of the HP BladeSystem Management Pack 1.0 for System Center Essentials 2007

The installation updates the system with components in the following table. By default, all files are installed in the %Program Files%\HP BladeSystem Management Packs for SCE directory. If you selected a different destination folder during the installation, these files are installed in the selected folder.

Name	Type	Component	Description
HPBladeSystemManagementPackDir	Environment variable	Default	Stores the destination folder
Management Packs \\HewlettPackard.Servers.BladeSystem.mp	Management Pack	Management Packs	Management Pack
Monitor Service \\HewlettPackard.Servers.BladeSystem.HPBlade	Dynamic Link Library	Monitor Service	PowerShell Cmdlet Dll
Monitor Service \\HewlettPackard.Servers.BladeSystem.HPBladeSystemEnclosureCmdlets.dll.config	Configuration file	Monitor Service	Configuration file for Cmdlet and Monitor Manager

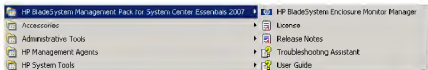
Name	Type	Component	Description
Monitor Service \\HewlettPackard.Servers.BladeSystem.HPBladeSystemEnclosureCmdlets.dll.InstallState	InstallUtil State file	Monitor Service	State file generated by InstallUtil during the installation
Monitor Service \\HewlettPackard.Servers.BladeSystem.HPBladeSystemEnclosureEventManager.dll	Dynamic Link Library	Monitor Service	DLL used for monitoring
Monitor Service \\HewlettPackard.Servers.BladeSystem.HPBladeSystemEnclosureEventManager.dll.InstallState	InstallUtil State file	Monitor Service	State file generated by InstallUtil during the installation
Monitor Service \\HPBladeSystemEnclosureEventMessages.dll	Dynamic Link Library	Monitor Service	NT Event Message Catalog file
Monitor Service \\HPBladeSystemEnclosureMonitorService.exe	Executable	Monitor Service	The Monitor Service software
Monitor Service \\HPBladeSystemEnclosureMonitorService.exe.config	Configuration file	Monitor Service	Configuration file for the Monitor Service
Release Notes and Documents \\HPBladeSystemMPITroubleshootingAssistant1_0.chm	Document	Release Notes and Documents	Troubleshooting Assistant document
Release Notes and Documents \\HPBladeSystemMPUserGuide1_0.chm	Document	Release Notes and Documents	User Guide
Release Notes and Documents \\HPBladeSystemMPLicense1_0.rtf	Document	Release Notes and Documents	License document
Release Notes and Documents \\HPBladeSystemMPReleaseNotes1_0.rtf	Document	Release Notes and Documents	Release Notes
Tools \\HPBladeSystemEnclosureMonitorManager.exe	Tool	Console Task Tools	HP BladeSystem Enclosure Monitor Manager
HPBladeSystemMPInstallation.log	Log	N/A	Logging text data of installation scripting result

The HP BladeSystem Management Pack kit imports the following management pack into the System Center Essentials server:

- Hewlett-Packard BladeSystem Management Pack—Defines all HP BladeSystem monitoring capability.

The installation results can be viewed using the Management Packs view in the System Center Essentials console. To confirm the imported management pack, go to the Administration view, and click **Management Packs**. "Hewlett-Packard BladeSystem Management Pack" will be listed. Also, import and installation logging data created during the installation is available in the HPBladeSystemMPInstallation.log file in the installation destination folder.

This installation adds entries in the programs menu on the Windows® Start menu.



Uninstalling the HP BladeSystem Management Pack 1.0 for System Center Essentials 2007

NOTE: Uninstalling the kits will not delete the imported Management Packs from the System Center Essentials servers.

Before attempting to remove the kits from the Add/Remove Programs menu, you must manually delete all dependent management pack data from the System Center Essentials console and the HP BladeSystem management pack.

You can check current dependency in the Administration screen. Right-click the "Hewlett-Packard BladeSystem Management Pack" you want to check, and select **Properties**. Select the **Dependencies** tab. If the Management Pack that depends on this Management Pack list does not show any dependency, then the selected management pack can be deleted. If there are dependencies present, then you must verify that it is appropriate to delete them.

After the Hewlett-Packard BladeSystem Management Pack is deleted from the System Center Essentials server, perform the following procedure to uninstall all kit contents.

1. Locate the HP BladeSystem Management Pack for System Center Essentials 2007 in the Windows® Add/Remove programs menu. To begin the removal process, click **Remove**.
2. Click **Yes** to continue the uninstallation.
3. The uninstallation will be completed automatically and the install entry will be removed from the Add/Remove programs list.

Repairing the installation of the HP BladeSystem Management Pack 1.0 for System Center Essentials 2007

You can repair installed components if a file is corrupted after the installation or operations.

1. Locate the HP BladeSystem Management Pack for System Center Essentials 2007 in the Windows® Add/Remove programs menu. To begin the repair process, click **Click here for support information**.
2. Click **Repair**.
3. The repair operation is automatically completed.

Using the software

Using the HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007

The HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 includes the following major elements:

- Classes
- Views
- Discoveries
- Monitors
- Rules
- Tasks

Before using the HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007, be sure that the following conditions exist:

- The HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 has been installed according to the installation procedures ("[Installation](#)" on page 9) defined in this guide.

Classes

The structure of the HP BladeSystem Classes is defined to seamlessly provide operations with the HP Server Management Pack for Microsoft® System Center Essentials 2007.

The HP BladeSystem Management Pack defines the following classes.

Classes (16)	
Name	InheritedFrom
 HP BladeSystem Enclosure Monitor Service	HP Management Server Software
 HP BladeSystem Enclosure Group	HP Group
 HP BladeSystem Enclosure	HP Logical Hardware
 HP BladeSystem Health Collection	HP Health Collection
 HP BladeSystem Health Component	HP Logical Hardware
 HP BladeSystem Onboard Administrator Collection	HP BladeSystem Health Collection
 HP BladeSystem Onboard Administrator	HP BladeSystem Health Component
 HP BladeSystem Thermal Subsystem	HP BladeSystem Health Collection
 HP BladeSystem Fan	HP BladeSystem Health Component
 HP BladeSystem Power Subsystem	HP BladeSystem Health Collection
 HP BladeSystem Power Supply	HP BladeSystem Health Component
 HP BladeSystem Device Bay Collection	HP BladeSystem Health Collection
 HP BladeSystem Device Bay	HP BladeSystem Health Component
 HP BladeSystem Interconnect Bay Collection	HP BladeSystem Health Collection
 HP BladeSystem Interconnect Bay	HP BladeSystem Health Component
 HP BladeSystem All Instance Group	Instance Group

The following table shows the properties of each class:

Class	Property name	Sample value
HP BladeSystem Enclosure	Name	IT03-ENCA
—	Model Name	BladeSystem c7000 Enclosure
—	Enclosure Serial Number	USE6321FJC
—	Part Number	412152B1
—	Spare Part Number	414050-001
—	Rack Name	IT03-Rack-A
—	Asset Tag	IT03-ENC-A-2007
—	Manufacturer	HP
—	Number of Device Bays	16
—	Number of Power Supply Bays	6
—	Number of Fan Bays	10
—	Number of Interconnect Bays	8
—	Number of OA Bays	2
—	IP Address	192.168.21.76
HP BladeSystem Device Bay Collection	Name	Device Bays—IT03-ENCA
—	Number of Present Device Bays	5
—	Enclosure Serial Number	USE6321FJC

Class	Property name	Sample value
—	Server Name	N/A
HP BladeSystem Device Bay	Name	Device Bay 2—ProLiant Server
—	Bay Number	2
—	Blade Type	Workstation
—	Manufacturer	HP
—	Product Name	ProLiant BL685c G1
—	Part Number	404704-B21
—	System Board Spare Part Number	410293-001
—	Serial Number	USM62500TE
—	BIOS Server Name	BL480c-VS13
—	BIOS Asset Tag	Xxxxxxx
—	ROM Version	114 05/17/2006
—	Integrated Lights-Out Name	IL05M62500TE
—	Integrated Lights-Out Address	192.168.21.79
—	Integrated Lights-Out MAC Address	00:16:35:3D:71:BB
—	Integrated Lights-Out Model	iLO2
—	Integrated Lights-Out Firmware Version	1.30 Jun 01 2007
HP BladeSystem Thermal Subsystem	Name	Thermal Subsystem—IT03-ENC-A
—	Redundancy	Redundant
—	Enclosure Serial Number	USE6321FJC
—	Server Name	N/A
HP BladeSystem Fan	Name	Fan—Bay1
—	Bay Number	1
—	Part Number	412140-B21
—	Present Power (Watts)	9
—	Spare Part Number	413996-001
—	Serial Number	(empty)
—	Product Name	BladeSystem c-Class fan
—	Fan Speed (% of max)	30
HP BladeSystem Interconnect Bay Collection	Name	Interconnect Bays—IT03-ENC-A
—	Number of Present Interconnect Bays	2
—	Enclosure Serial Number	USE6321FJC
—	Server Name	N/A
HP BladeSystem Interconnect Bay	Name	Interconnect Bay—Bay 3

Class	Property name	Sample value
—	Bay Number	3
—	Type	Ethernet
—	Product Name	Bracade 4/12 SAN Switch for HP c-Class BladeSystem
—	Management IP Address	10.77.77.77
—	User Assigned Name	Swd77
—	Part Number	AE370A
—	Spare Part Number	411120-001
—	Serial Number	CN8632600D
—	Manufacturer	BORCADE
—	Temperature Sensor	Present
HP BladeSystem Onboard Administrator Collection	Name	Onboard Administrators – IT03-ENCA
—	Number of Present OA Bays	2
—	Enclosure Serial Number	USE6321FJC
—	Server Name	N/A
HP BladeSystem Onboard Administrator	Name	<Active Standby> Onboard Administrator
—	Bay Number	1
—	Spare Part Number	414055-001
—	Firmware Version	2.02
—	Manufacturer	HP
—	Part Number	407296-001
—	Role	ACTIVE
—	IP Address	192.168.21.68
—	Serial Number	O96MK0260
—	Device Name	BladeSystem c7000 Onboard Administrator
HP BladeSystem Power Subsystem	Name	Power Subsystem—IT03-ENCA
—	Enclosure Power Mode	AC Redundant with Power Cabling
—	Enclosure Serial Number	USE6321FJC
—	Server Name	N/A
HP BladeSystem Power Supply	Name	Power Supply – Bay 1
—	Bay Number	1
—	Present Output (Watts)	405
—	Output Capacity (Watts)	2250
—	Spare Part Number	411099-001
—	Serial Number	5A2280AHLTA0AB
—	Part Number	412138B21

Views

The System Center Essentials Console provides a collection of folders and windows for viewing information stored in the System Center Essentials database. The HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 includes predefined HP BladeSystem Enclosure views that present information about each HP BladeSystem Enclosure and associated alerts.

The following views are added on the System Center Essentials Console after successful installation of the HP BladeSystem Management Pack 1.0 for System Center Essentials 2007:

- **HP BladeSystem Enclosures**—This is the root folder that includes all HP BladeSystem related views. This folder appears in the HP Servers folder which is defined by HP ProLiant Server Management Pack for System Center Essentials 2007. Some Enclosure monitored information is shown in HP Servers views.
- **HP BladeSystem Enclosures/Active Alerts**—This view displays all active alerts generated from the HP BladeSystem Enclosures and HP BladeSystem Enclosure Monitor Service. The same alerts will be seen in the HP Servers/Active Alerts view.
- **HP BladeSystem Enclosures/Device Bay State**—This view displays all device bays with state and properties in managed HP BladeSystem Enclosures.
- **HP BladeSystem Enclosures/Enclosure Diagram**—This view displays the diagram view starting with the HP BladeSystem Enclosure Group. The same group is shown under the HP Servers Group from the HP Servers/Server Diagram view.
- **HP BladeSystem Enclosures/Enclosure State**—This view displays the state view by HP BladeSystem Enclosures.
- **HP BladeSystem Enclosures/Health Collection State**—This view displays the state view by HP BladeSystem Health Collections. The same Health Collections are shown in the HP Servers/Health Collection State view.
- **HP BladeSystem Enclosures/Monitor Service State**—This view displays the state view of the HP BladeSystem Enclosure Monitor Service. The same Monitor Service State is shown at HP Servers/HP Management Servers.
- **HP BladeSystem/Task Status**—This view displays the task results. Only remote tasks will appear here.

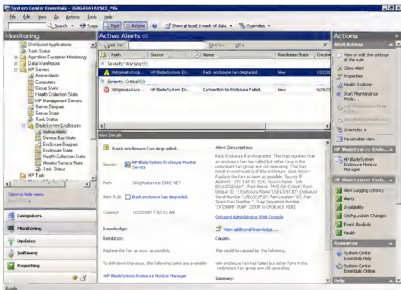
Active Alerts view

The Active Alerts view displays all active alerts associated with HP BladeSystem classes including SNMP Trap alerts from the HP BladeSystem and software alerts from the HP BladeSystem Enclosure Monitor Service. To display details for an individual alert, select the alert from the Active Alerts pane. The Alert Details pane displays HP Knowledge base text with the originated Windows NT® Event message in the Alert Description.

The predefined event processing rules included with the HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 are designed to automatically identify and display HP BladeSystem events received in the Windows® Event Log as System Center Essentials alerts. These events are located in the HP BladeSystem event log and are all generated by the HP BladeSystem Enclosure Monitor Service.

The following information appears in the alert details:

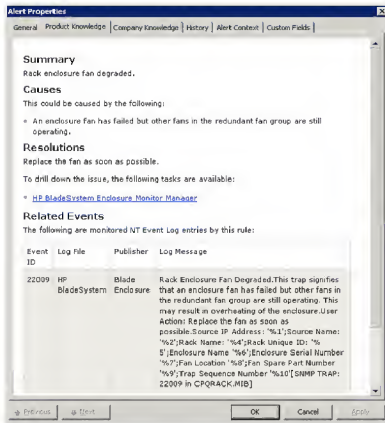
- Alert Name
- Source of Alert
- Path
- Alert Rule Name
- Created Time
- Alert Description
- Knowledge
 - Resolution with embedded Cansole tasks
 - Causes
 - Summary
 - Related Links



Analyzing HP alerts

The HP alerts contain HP BladeSystem hardware and services information that enable you to identify the cause of an issue and implement a timely and effective response.

The Product Knowledge tab displays suggested resolutions to the alert. To view full knowledge information, click **View additional knowledge** from the Alert Details pane. If necessary, launch the Console Tasks listed in the Product Knowledge.

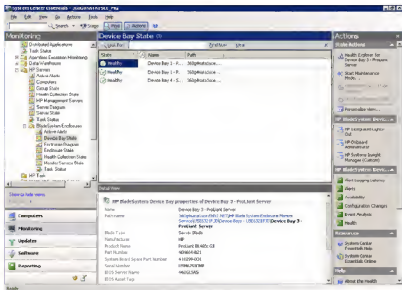


Use the information in the alert to implement a rapid response and maintain system availability.

For additional system data, launch the HP BladeSystem Enclosure Monitor Manager for the monitoring configuration, launch the HP Onboard Administrator on the individual enclosure from the link in the Alert Description at Alert Details panel, or use HP SIM to manage multiple enclosures. To set up the custom HP SIM task, see the HP Server Management Packs user guide.

Device Bay State view

The Device Bay State view displays the state of all device bays in all managed enclosures. The device bay contains Blades such as Server Blade, Storage Blade, Workstation Blade and IO Blade. The Detail View in the lower pane shows properties of the selected device bay.



Enclosure Diagram view

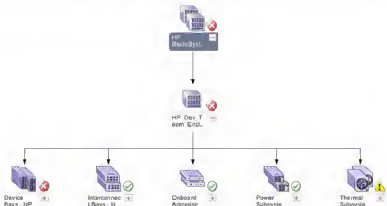
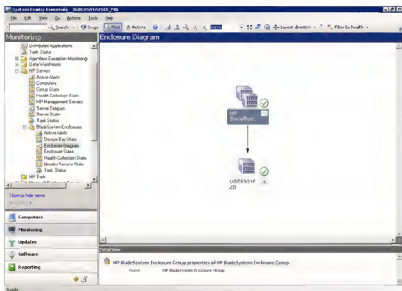
The Enclosure Diagram view provides a graphical display of groups and associated HP BladeSystem Enclosures, subsystems (collections), and components. Expand each icon node to drill down to the next level of information.

The Enclosure Diagram view show associated hierarchical view with following order:

- Enclosure Group
- Enclosure
- Health Collection
 - Device Bays
 - Interconnect Bays
 - Onboard Administrators
 - Power Subsystem
 - Thermal Subsystem
- Health Component

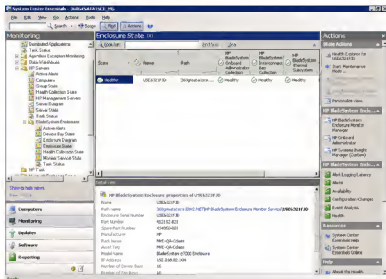
- o Device Bay under Device Bays
- o Interconnect Bay under Interconnect Bays
- o Onboard Administrator under Onboard Administrators
- o Power Supply under Power Subsystem
- o Fan under Thermal Subsystem

The state of the lower component will be rolled up to Enclosure Group.



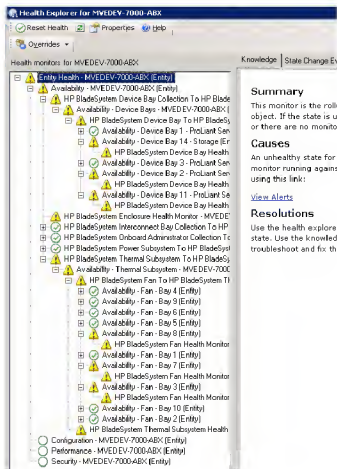
Enclosure State view

The Enclosure State view displays each state of the HP BladeSystem Enclosure associated with the Health Collection information. To view detailed state information for HP health collection and components for an enclosure, select the enclosure, and launch the Health Explorer from the Context menu or from the link in the Actions panel.



Health Explorer

The Health Explorer can be launched from the State view and the Diagram view after selecting a target component. It displays the result of state propagation in folder style. The Health Explorer automatically expands those folders in which red or yellow states are observed. Select the last node in the folder to get the knowledge information, and then select the **State Change Event** tab to view state change history.



Summary

This monitor is the roll object. If the state is u or there are no monito

Causes

An unhealthy state for monitor running agains using this link:

[View Alerts](#)

Resolutions

Use the health explore state. Use the knowled troubleshoot and fix th

The following figure is an example of Health State Change history and state property data. The Details pane contains a list of properties with Health State Update and Operational Status.

Knowledge State Change Events (2)			
Time	From	To	Operational State
9/11/2007 9:51 AM			
9/11/2007 9:47 AM			
Details			
Fan.Bay10.OperationalStatus			Success
Fan.Bay10.OperationalStatus			OK
PowerSupplies.US E6321FJC.HealthState			Success
PowerSupplies.US E6321FJC.OperationalStatus			OK
PowerSupply.Bay1.HealthState			Success
PowerSupply.Bay1.OperationalStatus			OK
PowerSupply.Bay2.HealthState			Success
PowerSupply.Bay2.OperationalStatus			OK
PowerSupply.Bay3.HealthState			Success
PowerSupply.Bay3.OperationalStatus			OK
PowerSupply.Bay4.HealthState			Success
PowerSupply.Bay4.OperationalStatus			OK
PowerSupply.Bay5.HealthState			Success
PowerSupply.Bay5.OperationalStatus			OK
PowerSupply.Bay6.HealthState			Success
PowerSupply.Bay6.OperationalStatus			OK
InterconnectBay.Bay1.HealthState			Success
InterconnectBay.Bay1.OperationalStatus			OK
InterconnectBay.Bay3.HealthState			Success
InterconnectBay.Bay3.OperationalStatus			OK
DeviceBay.Bay1.HealthState			Success
DeviceBay.Bay1.OperationalStatus			OK
DeviceBay.Bay2.HealthState			Warning
DeviceBay.Bay2.OperationalStatus			Degraded
DeviceBay.Bay3.HealthState			Success
DeviceBay.Bay3.OperationalStatus			OK
DeviceBay.Bay11.HealthState			Error
DeviceBay.Bay11.OperationalStatus			Non-Recoverable Error
DeviceBay.Bay14.HealthState			Warning
DeviceBay.Bay14.OperationalStatus			Degraded

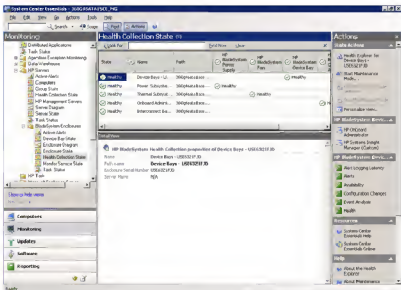
The Health State is available by enclosure, subsystems and components. The following are the key words used in the Details pane:

- Enclosure—Summary state of enclosure
- Thermal—Summary state of thermal subsystem
- Fan—A fan state
- PowerSupplies—Summary state of power subsystem

- PowerSupply—A power supply state
- OnboardAdministrator—An HP Onboard Administrator state
- InterconnectBay—An interconnect bay state
- DeviceBay—A device bay state

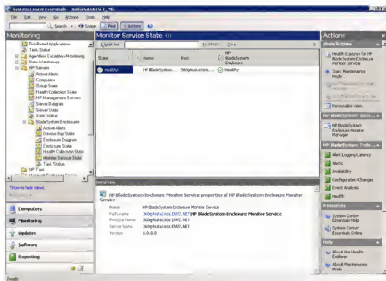
Health Collection State view

The Health Collection State view displays the state of all health collections of the HP BladeSystem Enclosures. You can view all failed collections simultaneously by sorting the State column.



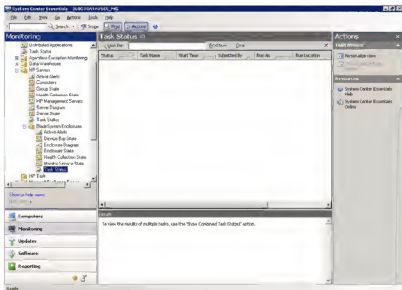
Monitor Service State view

The Monitor Service State view displays the state of all Monitor Services.



Task Status view

The Task Status view displays task results. HP has no predefined remote tasks, so this view may show no status most of the time.



Discovering HP BladeSystem enclosures

The HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 includes many discovery rules in the management pack.

Discovery rules

The HP BladeSystem Enclosures Management Pack contains the following discovery rules:

- **HP BladeSystem Enclosure All Instance Group Discovery**—This discovery rule establishes group memberships to HP BladeSystem Enclosure All Instance Group singleton class instance.
- **HP BladeSystem Enclosure Discovery Rule**—This discovery rule discovers HP BladeSystem Enclosure, HP BladeSystem Health Collection and HP Blade Health Component class instances.
- **HP BladeSystem Enclosure Group to HP Blade Enclosure Membership Rule**—This rule creates membership to HP BladeSystem Enclosure into HP Blade Enclosure Group.
- **HP Servers Group to HP BladeSystem Enclosure Group Membership Rule**—This rule creates membership to HP BladeSystem Enclosure Group into HP Servers Group.

- **HP BladeSystem Enclosure Monitor Service Discovery Rule**—This rule discovers the Monitor Service on a managed node. This rule is the primary rule to locate the Monitor Service and start the management pack into action.

State monitors

The HP BladeSystem Enclosures Management Pack contains the following state monitors:

- **HP BladeSystem Enclosure Health Monitor**—This monitor rule monitors the health of HP BladeSystem Enclosure. It executes a PowerShell script and uses a property bag to process. The property bag contains "Enclosure.<SerialNumber>.HealthState" property.
- **HP BladeSystem Onboard Administrator Health Monitor**—This monitor rule monitors the health of Onboard Administrator of HP BladeSystem Enclosure. It executes a PowerShell script and uses a property bag to process. The property bag contains "OnboardAdministrator.<BayNumber>.HealthState" property.
- **HP BladeSystem Thermal Subsystem Health Monitor**—This monitor rule monitors the health of Cooling Collection of HP BladeSystem Enclosure. It executes a PowerShell script and uses a property bag to process. The property bag contains "Cooling.<SerialNumber>.HealthState" property.
- **HP BladeSystem Fan Health Monitor**—This monitor rule monitors the health of Fan of HP Blade Enclosure. It executes a PowerShell script and uses a property bag to process. The property bag contains "Fan.<BayNumber>.HealthState" property.
- **HP BladeSystem Power Subsystem Health Monitor**—This monitor rule monitors the health of Power Supply Collection of HP BladeSystem Enclosure. It executes a PowerShell script and uses a property bag to process. The property bag contains "PowerSupplies.<SerialNumber>.HealthState" property.
- **HP BladeSystem Power Supply Health Monitor**—This monitor rule monitors the health of Power Supply of HP BladeSystem Enclosure. It executes a PowerShell script and uses a property bag to process. The property bag contains "PowerSupply.<BayNumber>.HealthState" property.
- **HP BladeSystem Interconnect Bay Health Monitor**—This monitor rule monitors the health of Interconnect Bay of HP BladeSystem Enclosure. It executes a PowerShell script and uses a property bag to process. The property bag contains "InterconnectBay.<BayNumber>.HealthState" property.
- **HP BladeSystem Device Bay Health Monitor**—This monitor rule monitors the health of Device Bay of HP BladeSystem Enclosure. It executes a PowerShell script and uses a property bag to process. The property bag contains "DeviceBay.<BayNumber>.HealthState" property.

Propagation monitors

The HP BladeSystem Enclosures Management Pack contains the following propagation monitors:

- **HP BladeSystem Enclosure Monitor Service To Windows Compute Health Rollup Monitor (ENABLED)**
- **HP BladeSystem Enclosure To HP BladeSystem Enclosure Monitor Service Health Rollup Monitor (DISABLED)**
- **HP BladeSystem Enclosure Group To HP Servers Group Health Rollup Monitor (ENABLED)**
- **HP BladeSystem Enclosure To HP Blade Enclosure Group Health Rollup Monitor (ENABLED)**
- **HP BladeSystem Onboard Administrator Collection To HP BladeSystem Enclosure Health Rollup Monitor (ENABLED)**

- HP BladeSystem Onboard Administrator To HP BladeSystem Onboard Administrator Collection Health Rollup Monitor (ENABLED)
- HP BladeSystem Cooling Collection To HP BladeSystem Enclosure Health Rollup Monitor (ENABLED)
- HP BladeSystem Fan To HP BladeSystem Cooling Collection Health Rollup Monitor (ENABLED)
- HP BladeSystem Power Supply Collection To HP BladeSystem Enclosure Health Rollup Monitor (ENABLED)
- HP BladeSystem Power Supply To HP BladeSystem Power Supply Collection Health Rollup Monitor (ENABLED)
- HP BladeSystem Device Bay Collection To HP BladeSystem Enclosure Health Rollup Monitor (ENABLED)
- HP BladeSystem Device Bay To HP BladeSystem Device Bay Collection Health Rollup Monitor (ENABLED)
- HP BladeSystem Interconnect Bay Collection To HP Blade Enclosure Health Rollup Monitor (ENABLED)
- HP BladeSystem Interconnect Bay To HP BladeSystem Interconnect Bay Collection Health Rollup Monitor (ENABLED)

Alert processing rules

Alert Processing Rules are defined to generate an alert from NT Events that are generated from the HP BladeSystem Enclosure Monitor Service. The HP BladeSystem Enclosure Monitor Service logs all events into the HP BladeSystem event log. The Appendix describes all the defined events that will be generated by the HP BladeSystem Enclosure Monitor Service.

There are 14 event processing rules identified in the management pack to generate Alerts for SNMP Trap based events:

Event ID	Event type	Message title
22005	Error	Rack Enclosure Overheated
22006	Warning	Rack Enclosure Overheating.
22008	Error	Rack Enclosure Fan Failed.
22009	Warning	Rack Enclosure Fan Degraded.
22013	Error	Rack Power Supply Failed.
22014	Warning	Rack Power Supply Degraded.
22018	Warning	Rack Power Subsystem Not Redundant.
22019	Warning	Rack Power Subsystem Input Voltage Problem.
22020	Warning	Rack Power Subsystem Overload.

22037	Warning	Onboard Administrator Degraded.
22041	Warning	Onboard Administrator Role Primary.
22042	Warning	Server Blade E-keying Failed.
22046	Error	Interconnect Failed.
22047	Warning	Interconnect Degraded.

Additionally, five alert processing rules has been defined for the Monitor Service events. The following events will be monitored and generated Alerts with Knowledge Base:

Event ID	Event type	Message title	Alert name
3	Error	SNMP Trap Service is not available	SNMP trap service failed.
14	Error	Connection to Enclosure Failed.	Connection to enclosure failed.
19	Error	Data Collection Failed.	Data collection failed.
23	Warning	Health Check Restarted a monitoring.	Health check degraded.
24	Error	Health Check Failed to Stop a monitoring.	Health check failed.
25	Error	Monitor Service Failed to load the configuration data.	Health check failed.
26	Error	Monitor Service Failed to respond.	Health check failed.

Tasks

The HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 includes predefined tasks that can be used to access in-depth HP BladeSystem information, carry out advanced remote server administration, and perform lifecycle management on multiple enclosures. HP tasks appear in the Actions window or context menu from associated class instance. Not all tasks appear in every view because tasks are associated with specific classes.

The HP BladeSystem Management Pack 1.0 for System Center Essentials 2007 includes the following tasks:

- HP BladeSystem Enclosure Monitor Manager
- HP Onboard Administrator
- HP Integrated Lights-Out

HP Onboard Administrator task

The HP Onboard Administrator task launches Internet Explorer to access the Onboard Administrator Web Console. This task is available from the HP BladeSystem Enclosure and any HP BladeSystem Health Collections. To access the Onboard Administrator Web Console, you must input your username and password in the initial login screen.

To launch the HP Onboard Administrator task:

1. Select an Enclosure or a Health Collection from views such as Enclosure State view, Health Collection view or Enclosure Diagram view.
2. Click **HP Onboard Administrator**.
3. Log in to HP Onboard Administrator.

HP Integrated Lights-Out task

Blade Servers in HP BladeSystem Enclosures include an Integrated Lights-Out management processor, which enables you to perform advanced, secure, and operating system-independent remote server management using a standard browser interface. The HP BladeSystem Management Pack 1.0 for System Center Essentials 2007 includes a task that collects HP Integrated Lights-Out management processor data and creates an associated browser link to remotely access the selected HP ProLiant Blade server.

To launch the HP Integrated Lights-Out task to display information:

1. Select a Device Bay from the Device Bay State view or by navigating to the desired bay using the Enclosure Diagram View.
2. Click **HP Integrated Lights-Out**.

3. Log in to HP Integrated Lights-Out.

HP Integrated Lights-Out 2

System Status | Remote Console | Virtual Devices | Administration | BIOS Class

Summary
System Information
iLO 2 Log
IML
Diagnostics
Insight Agent

Status Summary

Server Name:	BL460C-VS12; ProLiant BL460c G1
UUID:	404664USM62500N5
Server Serial Number:	USM62500N5
System ROM:	I15 05/25/2006; backup system ROM: 05/25/2006
System Health:	Ok
Internal Health LED:	Ok
Server Power:	Momentary Press ON
UTD Light:	Yam UID On OFF
Last Used Remote Console:	Launch Integrated Remote Console
Latest IML Entry:	Network Adapter Link Down (Slot 0, Port 2)
iLO 2 Name:	ILOUSM62500N5
License Type:	iLO 2 Standard Blade Edition
iLO 2 Firmware Version:	1.20 06/06/2005
IP address:	192.168.21.78
Active Sessions:	iLO 2 User: vs
Latest iLO 2 Event Log Entry:	Browser login: vs - 192.168.21.68
iLO 2 Date/Time:	02/20/2007 14:23:41

Data current as of 02/20/2007 14:23:41

Trusted Sites

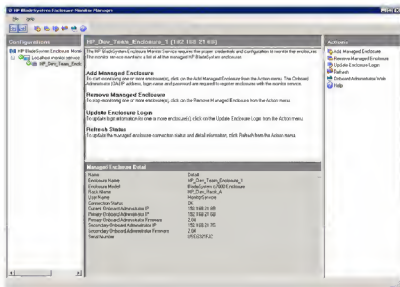
HP BladeSystem Enclosure Monitor Manager

The HP BladeSystem Enclosure Monitor Service requires user configuration for the BladeSystem Management Pack to start monitoring an enclosure. The Monitor Manager allows you to configure the required credentials and configuration information.

The Monitor Manager can be launched at the last step of the Management Pack installation.

Once the Management Pack is installed, the Monitor Manager is accessible from the Actions pane in the Enclosure diagram and Monitor service views. The Monitor Manager can also be launched from the Start menu.

The Manitar Manager task is only visible in the Manitar Service State view until at least one enclosure is registered.



After adding, removing or updating an enclosure, click **Refresh** from the Actions pane, or the Refresh icon to update the manitar service tree-list in the left panel.

The Manitar Manager contains 3 panes:

- Tree pane (left)—This pane can be collapsed and expanded. The pane contains a tree that shows all connected Manitar Services and enclosures managed by the Manitar Service. The tree has a root node of the HP BladeSystem Enclosure Manitar Manager. The second level lists all connected Enclosure Manitar Services. The third level shows all the enclosures managed by the Enclosure Manitar Service. The Tree pane also shows the status of the Manitar Service and the BladeSystem enclosure monitoring status.
- Detail pane (middle)—This pane's content changes according to the node selected from the Tree pane.
- Actions pane (right)—This pane can be collapsed and expanded. This pane's content changes according to the node selected from the Tree pane.

Refreshing the data

To refresh the data shown in the Manitar Manager, click **Refresh** from the Actions pane or click the Refresh icon. The Manitar Manager will query the Manitar Service for the latest information. A Refresh is required to see the latest connection state.

Adding managed enclosures

To add one or multiple managed enclosures, click **Add Managed Enclosure** in the Actions pane, or click the Add icon. The Add Managed Enclosure wizard appears. The enclosure Onboard Administrator must be configured with login and SNMP settings prior to using the Add Managed Enclosure wizard. The primary and secondary (optional) IP addresses of the Onboard Administrator and the login information are needed to complete the wizard. The wizard validates the information with the Onboard Administrator before adding the new enclosure. The wizard also ensures that the Onboard Administrator meets the minimum supported firmware version. Follow the directions on the screen until the new enclosure is added to the monitor service.

The Enclosure Monitoring Service starts monitoring the enclosures immediately after the wizard completes. However, the newly added enclosure(s) will not be available in the System Center Essentials Console until it completed the next discovery cycle.

Removing managed enclosures

To remove one or multiple managed enclosures from the monitor service, click **Remove managed enclosure** from the Actions pane of the Monitor Manager, or click the Remove icon. The Remove managed enclosure wizard appears. Follow the instructions on the screen until the enclosure has been removed from the monitor service. The changes will be reflected after the next discovery cycle.

The Enclosure Monitoring Service stops monitoring the removed enclosure(s) immediately after the wizard completes. However, the System Center Essentials Console continues to display the removed enclosure(s) and subsystems until these elements are removed after the next discovery cycle.

Updating enclosure login

To update an enclosure's login information, click **Update enclosure login** from the Actions pane or click the Update icon. The Update enclosure login wizard appears. Follow the instructions on the screen until the login information is updated.

The Enclosure Monitoring Service starts immediately after the wizard completes, and uses the updated information. However, any changes to the System Center Essentials Console are not applied until after the next discovery cycle.

Launching the Onboard Administrator web

To launch the web site for the Onboard Administrator, select the managed enclosure from the Tree pane, and click **Onboard Administrator Web** from the Actions pane or the Onboard Administrator Web icon. Internet Explorer appears with the Onboard Administrator Web link opened.

Launching the HP BladeSystem Management Pack help

To launch the HP BladeSystem Management Pack help document, click **Help** from the Actions pane or the Help icon.

HP BladeSystem Enclosure Monitor Service

The HP BladeSystem Management Pack for System Center Essentials 2007 kit installs the HP BladeSystem Enclosure Monitor Service as a Windows Service. It runs on the system to monitor the HP BladeSystem c-Class enclosures.

The HP BladeSystem Enclosure Monitor Service is configured by the HP BladeSystem Enclosure Monitor Manager to register monitoring enclosures. After a new enclosure registration, the HP BladeSystem Enclosure Monitor Service connects to an HP BladeSystem Onboard Administrator to collect inventory and monitor state information. It also listens to SNMP Trap service to capture and translate SNMP Trap data generated by the HP BladeSystem Onboard Administrator into the HP BladeSystem event log. All activities are reported into the event log. The monitored inventory and state data is passed to the System Center Essentials through the HP BladeSystem Management Pack discovery rules and monitor rules.

NT Event lists for HP BladeSystem Enclosure Monitor Service

Service NT events

Service events log the Monitor Service activity when it begins and ends.

Enclosure Monitor Service Started

NT Provider: Blade Enclosure

NT Event ID: 1

NT Event Type: Informational

NT Event Message:

Enclosure Monitor Service Started.

Enclosure Monitor Service Stopped

NT Provider: Blade Enclosure

NT Event ID: 2

NT Event Type: Informational

NT Event Message:

Enclosure Monitor Service Stopped.

SNMP Trap Service is not available

NT Provider: Blade Enclosure

NT Event ID: 3

NT Event Type: Error

NT Event Message:

SNMP Trap Service is not available.

Monitor NT events

Monitor events log the monitoring process of the Monitor Service to communicate with the Onboard Administrators.

Connecting to Enclosure

NT Provider: Blade Enclosure
NT Event ID: 11
NT Event Type: Informational
NT Event Message:
Connecting to Enclosure.
IP Address: '%1';
URL: '%2'

Connected to Enclosure

NT Provider: Blade Enclosure
NT Event ID: 12
NT Event Type: Informational
NT Event Message:
Connected to Enclosure.
IP Address: '%1';
URL: '%2';
Serial Number: '%3'

Disconnected from Enclosure

NT Provider: Blade Enclosure
NT Event ID: 13
NT Event Type: Informational
NT Event Message:
Disconnected from Enclosure.
IP Address: '%1';
URL: '%2'

Connection to Enclosure Failed

NT Provider: Blade Enclosure
NT Event ID: 14
NT Event Type: Error
NT Event Message:
Connection to Enclosure Failed.
IP Address: '%1';

URL: '%2';

Error Information: '%4'

Data Collection Started

NT Provider: Blade Enclosure

NT Event ID: 15

NT Event Type: Informational

NT Event Message:

Data Collection Started.

IP Address: '%1';

URL: '%2';

Serial Number: '%3'

Collecting Information:

%4

The following module list will appear:

- Enclosure Information
- Blade Information
- Onboard Administrator Information
- Cooling related Information
- Power related Information
- Interconnect Information
- Lcd Information

Data Collection Completed

NT Provider: Blade Enclosure

NT Event ID: 16

NT Event Type: Informational

NT Event Message:

Data Collection Completed.

IP Address: '%1';

URL: '%2';

Serial Number: '%3';

Data Miss Message:

%4

SOAP Event Collection Started

NT Provider: Blade Enclosure
NT Event ID: 17
NT Event Type: Informational
NT Event Message:
SOAP Event Collection Started.
IP Address: '%1';
URL: '%2';
Serial Number: '%3'

SOAP Event Collection Stopped

NT Provider: Blade Enclosure
NT Event ID: 18
NT Event Type: Informational
NT Event Message:
SOAP Event Collection Stopped.
IP Address: '%1';
URL: '%2';
Serial Number: '%3'

Data Collection Failed

NT Provider: Blade Enclosure
NT Event ID: 19
NT Event Type: Error
NT Event Message:
Data Collection Failed.
IP Address: '%1';
URL: '%2';
Serial Number: '%3';
Error Information: '%4'

SNMP Trap Collection Started

NT Provider: Blade Enclosure
NT Event ID: 20
NT Event Type: Informational

NT Event Message:
SNMP Trap Collection Started.

Health Check Started

NT Provider: Blade Enclosure
NT Event ID: 21
NT Event Type: Informational
NT Event Message:
Health Check Started.

Health Check Stopped

NT Provider: Blade Enclosure
NT Event ID: 22
NT Event Type: Informational
NT Event Message:
Health Check Stopped.

Health Check restarted a monitoring

NT Provider: Blade Enclosure
NT Event ID: 23
NT Event Type: Warning
NT Event Message:
Health Check Restarted a monitoring.
Monitor Name: '%4'

Health Check failed to stop a monitoring

NT Provider: Blade Enclosure
NT Event ID: 24
NT Event Type: Error
NT Event Message:
Health Check Failed to Stop a monitoring.
Monitor Name: '%4'

Monitor Service failed to load the configuration data

NT Provider: Blade Enclosure

NT Event ID: 25
NT Event Type: Error
NT Event Message:
Monitor Service failed to load the configuration data.

Monitor Service failed to respond

NT Provider: Blade Enclosure
NT Event ID: 26
NT Event Type: Error
NT Event Message:
Monitor Service Failed to respond.
Error Information: '%4'

SOAP NT events

SOAP events log all SOAP Events with raw data format. "%2" shows the data structure of SOAP Events translated to be readable by the user.

SOAP event informational

NT Provider: Blade Enclosure
NT Event ID: 31
NT Event Type: Informational
NT Event Message:
SOAP Event Informational.
Event ID: '%1'
%2

SNMP trap NT events

SNMP Trap Events log all SNMP traps generated by the Onboard Administrator registered by the user. It uses an IP Address to identify SNMP traps.

Rack name changed

NT Provider: Blade Enclosure
NT Event ID: 22001
NT Event Type: Informational
NT Event Message:

Rack Name Changed.

This trap signifies that an agent or utility has changed the name of the rack. Each server blade in each enclosure within the rack will be updated to reflect the new rack name. It can take several minutes for the rack name change to be propagated throughout the entire rack.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Rack Serial Number '%6';

Trap Sequence Number '%7'

[SNMP TRAP: 22001 in CPQRACK.MIB]

Rack enclosure name changed

NT Provider: Blade Enclosure

NT Event ID: 22002

NT Event Type: Informational

NT Event Message:

Rack Enclosure Name Changed.

This trap signifies that an agent or utility has changed the name of an enclosure within the rack. Each component within the rack will be updated to reflect the new enclosure name. It can take several minutes for the enclosure name change to be propagated throughout the entire enclosure.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Enclosure Name '%6';

Enclosure Serial Number '%7';

Enclosure Model '%8';

Trap Sequence Number '%9'

[SNMP TRAP: 22002 in CPQRACK.MIB]

Enclosure removed

NT Provider: Blade Enclosure

NT Event ID: 22003

NT Event Type: Informational

NT Event Message:

Enclosure Removed.

This trap signifies that an enclosure has been removed from the rack.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rock Name: '%4';

Rock Unique ID: '%5';

Enclosure Name '%6';

Enclosure Model '%7';

Enclosure Serial Number '%8';

Enclosure Spore Port Number '%9';

Trap Sequence Number '%10'

[SNMP TRAP: 22003 in CPQRACK.MIB]

Onboard Administrator Web Console

Enclosure inserted

NT Provider: Blade Enclosure

NT Event ID: 22004

NT Event Type: Informational

NT Event Message:

Enclosure Inserted.

This trap signifies that an enclosure has been inserted into the rack.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rock Name: '%4';

Rock Unique ID: '%5';

Enclosure Name '%6';

Enclosure Model '%7';

Enclosure Serial Number '%8';

Enclosure Spore Port Number '%9';

Trap Sequence Number '%10'

```
[SNMP TRAP: 22004 in CPQRACK.MIB]
<a href="https://%1/">Onboard Administrator Web Console</a>
```

Rack enclosure overheated

NT Provider: Blade Enclosure

NT Event ID: 22005

NT Event Type: Error

NT Event Message:

Rack Enclosure Overheated.

This trap signifies that an enclosure temperature sensor has been tripped indicating an overheat condition.

User Action: Shutdown the enclosure and possibly the rack as soon as possible. Insure all fans are working properly and that air flow in the rack has not been blocked.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Enclosure Name '%6';

Enclosure Serial Number '%7';

Sensor Location '%8';

Enclosure Spine Port Number '%9';

Trap Sequence Number '%10'

```
[SNMP TRAP: 22005 in CPQRACK.MIB]
<a href="https://%1/">Onboard Administrator Web Console</a>
```

Rack enclosure overheating

NT Provider: Blade Enclosure

NT Event ID: 22006

NT Event Type: Warning

NT Event Message:

Rack Enclosure Overheating.

This trap signifies that an enclosure temperature sensor has been tripped indicating a possible overheat condition.

User Action: Shutdown the enclosure and possibly the rack as soon as possible. Insure all fans are working properly and that air flow in the rack has not been blocked.

Source IP Address: '%1';

Source Name: '%2';

Rock Name: '%4';
Rock Unique ID: '%5';
Enclosure Name '%6';
Enclosure Serial Number '%7';
Sensor Location '%8';
Enclosure Spore Port Number '%9';
Trap Sequence Number '%10'
[SNMP TRAP: 22006 in CPQRACK.MIB]
Onboard Administrator Web Console

Rack enclosure temperature normal

NT Provider: Blade Enclosure
NT Event ID: 22007
NT Event Type: Informational
NT Event Message:
Rack Enclosure Temperature Normal.
This trap signifies that an enclosure temperature sensor has returned to normal.
User Action: None.
Source IP Address: '%1';
Source Name: '%2';
Rock Name: '%4';
Rock Unique ID: '%5';
Enclosure Name '%6';
Enclosure Serial Number '%7';
Sensor Location '%8';
Enclosure Spore Port Number '%9';
Trap Sequence Number '%10'
[SNMP TRAP: 22007 in CPQRACK.MIB]
Onboard Administrator Web Console

Rack enclosure fan failed

NT Provider: Blade Enclosure
NT Event ID: 22008
NT Event Type: Error
NT Event Message:

Rack Enclosure Fan Failed.

This trap signifies that an enclosure fan has failed and fewer than the minimum number of fans in the redundant fan group are operating. This can result in the enclosure overheating.

User Action: Replace the fan as soon as possible.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Enclosure Name '%6';

Enclosure Serial Number '%7';

Fan Location '%8';

Fan Spare Part Number '%9';

Trap Sequence Number '%10'

[SNMP TRAP: 22008 in CPQRACK.MIB]

[Onboard Administrator Web Console](https://%1/)

Rack enclosure fan degraded

NT Provider: Blade Enclosure

NT Event ID: 22009

NT Event Type: Warning

NT Event Message:

Rack Enclosure Fan Degraded.

This trap signifies that an enclosure fan has failed, but other fans in the redundant fan group are still operating. This can result in the enclosure overheating.

User Action: Replace the fan as soon as possible.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Enclosure Name '%6';

Enclosure Serial Number '%7';

Fan Location '%8';

Fan Spare Part Number '%9';

Trap Sequence Number '%10'

[SNMP TRAP: 22009 in CPQRACK.MIB]

[Onboard Administrator Web Console](https://%1/)

Rack enclosure fan OK

NT Provider: Blade Enclosure

NT Event ID: 22010

NT Event Type: Informational

NT Event Message:

Rack Enclosure Fan OK.

This trap signifies that an enclosure fan has returned to normal operation.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Enclosure Name '%6';

Enclosure Serial Number '%7';

Fan Location '%8';

Fan Spare Part Number '%9';

Trap Sequence Number '%10'

[SNMP TRAP: 22010 in CPQRACK.MIB]

[Onboard Administrator Web Console](https://1/)

Rack enclosure fan removed

NT Provider: Blade Enclosure

NT Event ID: 22011

NT Event Type: Warning

NT Event Message:

Rack Enclosure Fan Removed.

This trap signifies that the enclosure fan has been removed.

User Action: Replace the fan.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Enclosure Name '%6';

Enclosure Serial Number '%7';

Fan Location '%8';

Fan Spare Part Number '%9';
Trap Sequence Number '%10'
[SNMP TRAP: 22011 in CPQRACK.MIB]
Onboard Administrator Web Console

Rack enclosure fan inserted

NT Provider: Blade Enclosure
NT Event ID: 22012
NT Event Type: Informational
NT Event Message:
Rack Enclosure Fan Inserted.
This trap signifies that the enclosure fan has been inserted.
User Action: None.
Source IP Address: '%1';
Source Name: '%2';
Rack Name: '%4';
Rack Unique ID: '%5';
Enclosure Name '%6';
Enclosure Serial Number '%7';
Fan Location '%8';
Fan Spare Part Number '%9';
Trap Sequence Number '%10'
[SNMP TRAP: 22012 in CPQRACK.MIB]
Onboard Administrator Web Console

Rack power supply failed

NT Provider: Blade Enclosure
NT Event ID: 22013
NT Event Type: Error
NT Event Message:
Rack Power Supply Failed.
This trap signifies that a power supply has failed.
User Action: Replace the power supply as soon as possible.
Source IP Address: '%1';
Source Name: '%2';

```
Rack Name: '%4';  
Rack Unique ID: '%5';  
Enclosure Name '%6';  
Power Supply Serial Number '%7';  
Power Supply Position '%8';  
Power Supply Firmware Revision '%9';  
Power Supply Spare Part Number '%10';  
Enclosure Serial Number '%11';  
Trap Sequence Number '%12'  
[SNMP TRAP: 22013 in CPQRACK.MIB]  
<a href="https://%1/">Onboard Administrator Web Console</a>
```

Rack power supply degraded

```
NT Provider: Blade Enclosure  
NT Event ID: 22014  
NT Event Type: Warning  
NT Event Message:  
Rack Power Supply Degraded.  
This trap signifies that a power supply has degraded.  
User Action: Replace the power supply as soon as possible.  
Source IP Address: '%1';  
Source Name: '%2';  
Rack Name: '%4';  
Rack Unique ID: '%5';  
Enclosure Name '%6';  
Power Supply Serial Number '%7';  
Power Supply Position '%8';  
Power Supply Firmware Revision '%9';  
Power Supply Spare Part Number '%10';  
Enclosure Serial Number '%11';  
Trap Sequence Number '%12'  
[SNMP TRAP: 22014 in CPQRACK.MIB]  
<a href="https://%1/">Onboard Administrator Web Console</a>
```

Rack power supply OK

NT Provider: Blade Enclosure

NT Event ID: 22015

NT Event Type: Informational

NT Event Message:

Rack Power Supply OK.

This trap signifies that a power supply has returned to normal operation.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rock Name: '%4';

Rock Unique ID: '%5';

Enclosure Name '%6';

Power Supply Serial Number '%7';

Power Supply Position '%8';

Power Supply Firmware Revision '%9';

Power Supply Spare Port Number '%10';

Enclosure Serial Number '%11';

Trap Sequence Number '%12'

[SNMP TRAP: 22015 in CPQRACK.MIB]

Onboard Administrator Web Console

Rack power supply removed

NT Provider: Blade Enclosure

NT Event ID: 22016

NT Event Type: Warning

NT Event Message:

Rack Power Supply Removed.

This trap signifies that the power supply has been removed.

User Action: Reinsert the power supply.

Source IP Address: '%1';

Source Name: '%2';

Rock Name: '%4';

Rock Unique ID: '%5';

Enclosure Name '%6';

Power Supply Serial Number '%7';
Power Supply Position '%8';
Power Supply Firmware Revision '%9';
Power Supply Spore Port Number '%10';
Enclosure Serial Number '%11';
Trop Sequence Number '%12'
[SNMP TRAP: 22016 in CPQRACK.MIB]
Onboard Administrator Web Console

Rack power supply inserted

NT Provider: Blade Enclosure
NT Event ID: 22017
NT Event Type: Informational
NT Event Message:
Rock Power Supply Inserted.
This trop signifies that the power supply has been inserted.
User Action: None.
Source IP Address: '%1';
Source Name: '%2';
Rock Name: '%4';
Rock Unique ID: '%5';
Enclosure Name '%6';
Power Supply Serial Number '%7';
Power Supply Position '%8';
Power Supply Firmware Revision '%9';
Power Supply Spore Port Number '%10';
Enclosure Serial Number '%11';
Trop Sequence Number '%12'
[SNMP TRAP: 22017 in CPQRACK.MIB]
Onboard Administrator Web Console

Rack power subsystem not redundant

NT Provider: Blade Enclosure
NT Event ID: 22018
NT Event Type: Warning

NT Event Message:

Rack Power Subsystem Not Redundant.

This trap signifies that the rack power subsystem is no longer in a redundant state.

User Action: Replace any failed power supplies as soon as possible to return the system to a redundant state.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Enclosure Name '%6';

Enclosure Serial Number '%7';

Trap Sequence Number '%8'

[SNMP TRAP: 22018 in CPQRACK.MIB]

[Onboard Administrator Web Console](https://%1/)

Rack power subsystem input voltage problem

NT Provider: Blade Enclosure

NT Event ID: 22019

NT Event Type: Warning

NT Event Message:

Rack Power Subsystem Input Voltage Problem.

This trap signifies that the rack power supply detected an input line voltage problem.

User Action: Check the power input for the power supply or replace any failed power supplies as soon as possible.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Enclosure Name '%6';

Power Supply Position '%7';

Power Supply Firmware Revision '%8';

Power Supply Input Line Status '%9'

(Power Supply Input Line Status values: 1=no error, 2=over voltage, 3=under voltage, 4=line hit, 5=brown out, 6=line power loss);

Power Supply Spare Part Number '%10';

Enclosure Serial Number '%11';

Trap Sequence Number '%12'
[SNMP TRAP: 22019 in CPQRACK.MIB]
Onboard Administrator Web Console

Rack power subsystem overload

NT Provider: Blade Enclosure
NT Event ID: 22020
NT Event Type: Warning
NT Event Message:
Rack Power Subsystem Overload.
This trap signifies that the rack power subsystem is in overload condition.
User Action: Replace any failed power supplies as soon as possible to return the system to a redundant state.
Source IP Address: '%1';
Source Name: '%2';
Rack Name: '%4';
Rack Unique ID: '%5';
Enclosure Name '%6';
Enclosure Spare Part Number '%7';
Enclosure Serial Number '%8';
Trap Sequence Number '%9'
[SNMP TRAP: 22020 in CPQRACK.MIB]
Onboard Administrator Web Console

Server blade removed

NT Provider: Blade Enclosure
NT Event ID: 22028
NT Event Type: Warning
NT Event Message:
Server Blade Removed.
This trap signifies that the server blade has been removed from the enclosure.
User Action: None.
Source IP Address: '%1';
Source Name: '%2';
Rack Name: '%4';
Rack Unique ID: '%5';

```
Enclosure Name '%6';  
Blade Name '%7';  
Blade Position '%8';  
Blade Spare Part Number '%9';  
Enclosure Serial Number '%10';  
Trap Sequence Number '%11'  
[SNMP TRAP: 22028 in CPQRACK.MIB]  
<a href="https://%1/">Onboard Administrator Web Console</a>
```

Server blade inserted

```
NT Provider: Blade Enclosure  
NT Event ID: 22029  
NT Event Type: Informational  
NT Event Message:  
Server Blade Inserted.  
This trap signifies that the server blade has been inserted into the enclosure.  
User Action: None.  
Source IP Address: '%1';  
Source Name: '%2';  
Rack Name: '%4';  
Rack Unique ID: '%5';  
Enclosure Name '%6';  
Blade Name '%7';  
Blade Position '%8';  
Blade Spare Part Number '%9';  
Enclosure Serial Number '%10';  
Trap Sequence Number '%11'  
[SNMP TRAP: 22029 in CPQRACK.MIB]  
<a href="https://%1/">Onboard Administrator Web Console</a>
```

Onboard Administrator degraded

```
NT Provider: Blade Enclosure  
NT Event ID: 22037  
NT Event Type: Warning  
NT Event Message:
```

Onboard Administrator Degraded.

This trap signifies that an Onboard Administrator has failed, but the other Onboard Administrator is still operating.

User Action: Replace the Onboard Administrator as soon as possible.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Enclosure Name '%6';

Enclosure Serial Number '%7';

Onboard Administrator Location '%8';

Onboard Administrator Spare Part Number '%9';

Onboard Administrator Serial Number '%10';

Trap Sequence Number '%11'

[SNMP TRAP: 22037 in CPQRACK.MIB]

<https://%1/>>Onboard Administrator Web Console

Onboard Administrator OK

NT Provider: Blade Enclosure

NT Event ID: 22038

NT Event Type: Informational

NT Event Message:

Onboard Administrator OK.

This trap signifies that an Onboard Administrator has returned to normal operation.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Enclosure Name '%6';

Enclosure Serial Number '%7';

Onboard Administrator Location '%8';

Onboard Administrator Spare Part Number '%9';

Onboard Administrator Serial Number '%10';

Trap Sequence Number '%11'

[SNMP TRAP: 22038 in CPQRACK.MIB]

<https://%1/>Onboard Administrator Web Console

Onboard Administrator removed

NT Provider: Blade Enclosure

NT Event ID: 22039

NT Event Type: Warning

NT Event Message:

Onboard Administrator Removed.

This trap signifies that an Onboard Administrator has been removed.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Enclosure Name '%6';

Enclosure Serial Number '%7';

Onboard Administrator Location '%8';

Onboard Administrator Spare Part Number '%9';

Onboard Administrator Serial Number '%10';

Trap Sequence Number '%11'

[SNMP TRAP: 22039 in CPQRACK.MIB]

<https://%1/>Onboard Administrator Web Console

Onboard Administrator inserted

NT Provider: Blade Enclosure

NT Event ID: 22040

NT Event Type: Informational

NT Event Message:

Onboard Administrator Inserted.

This trap signifies that an Onboard Administrator has been inserted.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

```
Enclosure Name '%6';
Enclosure Serial Number '%7';
Onboard Administrator Location '%8';
Onboard Administrator Spare Part Number '%9';
Onboard Administrator Serial Number '%10';
Trap Sequence Number '%11'
[SNMP TRAP: 22040 in CPQRACK.MIB]
<a href="https://%1/">Onboard Administrator Web Console</a>
```

Onboard Administrator role primary

```
NT Provider: Blade Enclosure
NT Event ID: 22041
NT Event Type: Warning
NT Event Message:
Onboard Administrator Role Primary.
This trap signifies that an Onboard Administrator has taken the role of primary.
User Action: None.
Source IP Address: '%1';
Source Name: '%2';
Rack Name: '%4';
Rack Unique ID: '%5';
Enclosure Name '%6';
Enclosure Serial Number '%7';
Onboard Administrator Location '%8';
Onboard Administrator Spare Part Number '%9';
Onboard Administrator Serial Number '%10';
Trap Sequence Number '%11'
[SNMP TRAP: 22041 in CPQRACK.MIB]
<a href="https://%1/">Onboard Administrator Web Console</a>
```

Server Blade E-keying failed

```
NT Provider: Blade Enclosure
NT Event ID: 22042
NT Event Type: Warning
NT Event Message:
```

Server Blade E-keying Failed.

This trap signifies that a server blade e-keying has failed, and there is a part mapping problem between a server mezz card and the interconnect.

User Action: Recconfigure server blade mezz cards.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Server Blade Enclosure Name '%6';

Server Blade Name '%7';

Server Blade Position '%8';

Server Blade Spare Part Number '%9';

Enclosure Serial Number '%10';

Trap Sequence Number '%11'

[SNMP TRAP: 22042 in CPQRACK.MIB]

<https://%1/>>Onboard Administrator Web Console

Server Blade E-keying OK

NT Provider: Blade Enclosure

NT Event ID: 22043

NT Event Type: Informational

NT Event Message:

Server Blade E-keying OK.

This trap signifies that a server blade e-keying has returned to normal operation.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Server Blade Enclosure Name '%6';

Server Blade Name '%7';

Server Blade Position '%8';

Server Blade Spare Part Number '%9';

Enclosure Serial Number '%10';

Trap Sequence Number '%11'

[SNMP TRAP: 22043 in CPQRACK.MIB]

<https://%1/>>Onboard Administrator Web Console

Interconnect removed

NT Provider: Blade Enclosure

NT Event ID: 22044

NT Event Type: Warning

NT Event Message:

Interconnect Removed.

This trap signifies that an interconnect has been removed from the enclosure.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rock Name: '%4';

Rock Unique ID: '%5';

Interconnect Enclosure Name '%6';

Interconnect Name '%7';

Interconnect Location '%8';

Interconnect Spine Port Number '%9';

Enclosure Serial Number '%10';

Trap Sequence Number '%11'

[SNMP TRAP: 22044 in CPQRACK.MIB]

<https://%1/>>Onboard Administrator Web Console

Interconnect inserted

NT Provider: Blade Enclosure

NT Event ID: 22045

NT Event Type: Warning

NT Event Message:

Interconnect Inserted.

This trap signifies that an interconnect has been inserted into the enclosure.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rock Name: '%4';

Rock Unique ID: '%5';

```
Interconnect Enclosure Name '%6';  
Interconnect Name '%7';  
Interconnect Location '%8';  
Interconnect Spore Port Number '%9';  
Enclosure Serial Number '%10';  
Trop Sequence Number '%11'  
[SNMP TRAP: 22045 in CPQRACK.MIB]  
<a href="https://%1/">Onboard Administrator Web Console</a>
```

Interconnect failed

```
NT Provider: Blade Enclosure  
NT Event ID: 22046  
NT Event Type: Error  
NT Event Message:  
Interconnect Failed.  
This trop signifies that a interconnect has failed.  
User Action: Replace the interconnect as soon as possible.  
Source IP Address: '%1';  
Source Name: '%2';  
Rock Name: '%4';  
Rock Unique ID: '%5';  
Interconnect Enclosure Name '%6';  
Interconnect Name '%7';  
Interconnect Location '%8';  
Interconnect Spore Port Number '%9';  
Enclosure Serial Number '%10';  
Trop Sequence Number '%11'  
[SNMP TRAP: 22046 in CPQRACK.MIB]  
<a href="https://%1/">Onboard Administrator Web Console</a>
```

Interconnect degraded

```
NT Provider: Blade Enclosure  
NT Event ID: 22047  
NT Event Type: Warning  
NT Event Message:
```

Interconnect Degraded.

This trap signifies that a interconnect has degraded.

User Action: Replace the interconnect as soon as possible.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Interconnect Enclosure Name '%6';

Interconnect Name '%7';

Interconnect Location '%8';

Interconnect Spare Part Number '%9';

Enclosure Serial Number '%10';

Trap Sequence Number '%11'

[SNMP TRAP: 22047 in CPQRACK.MIB]

Onboard Administrator Web Console

Interconnect OK

NT Provider: Blade Enclosure

NT Event ID: 22048

NT Event Type: Informational

NT Event Message:

Interconnect OK.

This trap signifies that an interconnect has returned to normal operation.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Interconnect Enclosure Name '%6';

Interconnect Name '%7';

Interconnect Location '%8';

Interconnect Spare Part Number '%9';

Enclosure Serial Number '%10';

Trap Sequence Number '%11'

[SNMP TRAP: 22048 in CPQRACK.MIB]

Onboard Administrator Web Console

Server Blade requested to low power

NT Provider: Blade Enclosure

NT Event ID: 22049

NT Event Type: Informational

NT Event Message:

Server Blade Requested To Low Power.

This trap signifies that a server blade is requested to low power.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Server Blade Enclosure Name '%6';

Server Blade Name '%7';

Server Blade Position '%8';

Server Blade Spare Part Number '%9';

Enclosure Serial Number '%10';

Trap Sequence Number '%11'

[SNMP TRAP: 22049 in CPQRACK.MIB]

Onboard Administrator Web Console

Server blade removed

NT Provider: Blade Enclosure

NT Event ID: 22050

NT Event Type: Informational

NT Event Message:

Server Blade Removed.

This trap signifies that a server blade has been removed from the enclosure.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

```
Server Blade Enclosure Name '%6';  
Server Blade Name '%7';  
Server Blade Position '%8';  
Server Blade Spare Part Number '%9';  
Enclosure Serial Number '%10';  
Server Blade Serial Number '%11';  
Server Blade Unique ID '%12';  
Trap Sequence Number '%13'  
[SNMP TRAP: 22050 in CPQRACK.MIB]  
<a href="https://%1/">Onboard Administrator Web Console</a>
```

Server Blade inserted

NT Provider: Blade Enclosure

NT Event ID: 22051

NT Event Type: Informational

NT Event Message:

Server Blade Inserted.

This trap signifies that a server blade has been inserted into the enclosure.

User Action: None.

Source IP Address: '%1';

Source Name: '%2';

Rack Name: '%4';

Rack Unique ID: '%5';

Server Blade Enclosure Name '%6';

Server Blade Name '%7';

Server Blade Position '%8';

Server Blade Spare Part Number '%9';

Enclosure Serial Number '%10';

Server Blade Serial Number '%11';

Server Blade Unique ID '%12';

Trap Sequence Number '%13'

[SNMP TRAP: 22051 in CPQRACK.MIB]

Onboard Administrator Web Console

Technical support

Additional references

The following additional information sources are available:

- Web pages related to the HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 (<http://www.hp.com/servers/integration>)
- HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 Troubleshooting Assistant

Before contacting HP support

Before contacting HP for support, review the following steps and collect the necessary system information to help expedite a resolution:

1. Review the troubleshooting information found in this guide.



IMPORTANT: Before proceeding, access the HP website (<http://www.hp.com/servers/integration>) to verify you are using the current version of the HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 User Guide. Use the part number and the date on the title page to determine which version you are using. The contents of this guide are updated frequently and newer versions are placed on the HP website. Download and open the updated file to use the current HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 User Guide.

2. See the HP website (<http://www.hp.com/servers/integration>) for product updates.
3. If you cannot resolve the problem with the information contained in this guide, then have the following information about your System Center Essentials environment available:
 - Microsoft® Windows® operating system version and patch levels
 - The HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007 version installed
 - The versions of Insight Management Agents as associated plug-in tools (such as Version Control Agents and Insight Diagnostics)
 - HP server type and models
 - HP server serial number
 - Screen prints of any error messages received
 - Detailed description of the problem

Technical support contact information for the HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007

For technical support for System Center Essentials, contact Microsoft® support.

For technical support for the HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007, e-mail HP support (<mailto:MOIntegrationPack.Support@hp.com>). See "Before contacting HP support (on page 68)" for a list of information to include in your e-mail. Be sure to include a contact name and e-mail address.

For technical support for HP products, excluding the HP BladeSystem Management Pack for Microsoft® System Center Essentials 2007, see "HP contact information (on page 69)."

HP contact information

For the name of the nearest HP authorized reseller:

- In the United States, see the HP US service locator webpage (http://www.hp.com/service_locator).
- In other locations, see the Contact HP worldwide (in English) webpage (<http://welcome.hp.com/country/us/en/wwwcontact.html>).

For HP technical support:

- In the United States, for contact options see the Contact HP United States webpage (http://welcome.hp.com/country/us/en/contact_us.html). To contact HP by phone:
 - Call 1-800-HP-INVENT (1-800-474-6836). This service is available 24 hours a day, 7 days a week. For continuous quality improvement, calls may be recorded or monitored.
 - If you have purchased a Core Pack (service upgrade), call 1-800-633-3600. For more information about Core Packs, refer to the HP website (<http://www.hp.com>).
- In other locations, see the Contact HP worldwide (in English) webpage (<http://welcome.hp.com/country/us/en/wwwcontact.html>).

Acronyms and abbreviations

ATA

Advanced Technology Attachment

BIOS

Basic Input/Output System

CPU

central processing unit

DLL

dynamic link library

FAQ

frequently asked questions

HTTP

hypertext transfer protocol

I/O

input/output

IDE

integrated device electronics

IMP

Insight Management Pack

IP

Internet Protocol

IRQ

interrupt request

MIB

management information base

MP

Management Pack

NIC

network interface controller

PCI

peripheral component interface

RAID

redundant array of inexpensive (or independent) disks

SAS

serial attached SCSI

SATA

serial ATA

SCSI

small computer system interface

SIM

Systems Insight Manager

SMH

System Management Homepage

SNMP

Simple Network Management Protocol

SP1

Service Pack 1

SQL

structured query language

UPS

uninterruptible power system

WMI

Windows Management Instrumentation

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